

- SUB  
C1*
- b2*
21. A non-woven material comprising a modified poly(ethylene oxide), wherein the modified poly(ethylene oxide) is modified by grafting a polar vinyl monomer to a poly(ethylene oxide) having an initial molecular weight within the range of about 50,000 g/mol to about 350,000 g/mol before grafting of the polar vinyl monomer.
22. The non-woven material of Claim 21, wherein the poly(ethylene oxide) has sufficient melt strength and sufficient melt elasticity for melt spinning into fibers.
23. The non-woven material of Claim 22, wherein the poly(ethylene oxide) has an apparent viscosity of less than 200 Pascal seconds at shear rates of not less than 100 second-1 and not greater than 1,000 second-1.
24. The non-woven of Claim 22, wherein the non-woven consists essentially of poly(ethylene oxide).
25. A non-woven comprising a graft copolymer of a poly(ethylene oxide) having an initial molecular weight within the range of about 50,000 g/mol to about 250,000 g/mol and a polar vinyl monomer.
26. The non-woven of Claim 25, wherein the modified poly(ethylene oxide) is modified from a poly(ethylene oxide) having an initial molecular weight before modification within the range of about 50,000 g/mol to about 100,000 g/mol.
27. The non-woven material of Claim 25, wherein the modified poly(ethylene oxide) is modified by the addition of an initiator.
28. The non-woven material of Claim 25, wherein the polar vinyl monomer is selected from the group consisting of poly(ethylene glycol) methacrylates and 2-hydroxyethyl methacrylate.
- Sub  
C2*
29. The non-woven material of Claim 28, wherein the polar vinyl monomer is a poly(ethylene glycol) ethyl ether methacrylate and has an average molecular weight of not greater than about 5,000 grams per mol.
30. The non-woven material of Claim 25, wherein the polar vinyl monomer is added within the range of about 0.1 to about 20 weight percent relative to the weight of the poly(ethylene oxide).

*SP3*  
*C3*

31. The non-woven material of Claim 28, wherein the polar vinyl monomer is a poly(ethylene glycol) ethyl ether methacrylate.

32. A method for processing a poly(ethylene oxide) non-woven material comprising the steps of:  
a) adding a poly(ethylene oxide) with a molecular weight within the range of about 50,000 g/mol to about 350,000 g/mol, a polar vinyl monomer, and an initiator into a reaction vessel;  
b) mixing the poly(ethylene oxide), the polar vinyl monomer and the initiator under conditions sufficient to graft the polar vinyl monomer onto the poly(ethylene oxide); and  
c) drawing fibers from the poly(ethylene oxide).

33. The method of Claim 32, wherein the polar vinyl monomer is a poly(ethylene glycol) ethyl ether methacrylate.

34. The method of Claim 32, wherein the polar vinyl monomer is selected from the group consisting of poly(ethylene glycol) methacrylates and 2-hydroxyethyl methacrylate.

35. A non-woven material by the method of Claim 32.

36. The non-woven material of Claim 21, wherein the non-woven material is produced by a spun-bond process.

37. The non-woven material of Claim 22, wherein the non-woven material is produced by a melt-blown process.

---

#### REMARKS

Support for new Claims 21-37 can be found generally throughout the Specification. Specifically at Pages 14-16. It is known in the art that fibers produced by the spun bond process and fibers drawn by hand and by a starter gun form a non-woven material.

Additionally, information regarding the patentability of new Claims 21-37 can be found in the Declaration of James Wang, Ph.D., under 37 C.F.R. § 1.132 as submitted herewith which distinguishes the present invention from the prior art cited in the parent application.